ABSTRACT

A dual path analog-to-digital conversion method and system. The system includes a first and second circuits. The first and second circuits each convert an input analog signal into digital signals at differing sample rates. The circuit having the slower sampling rate aliases frequency components of the input analog signal that are higher than half that sampling rate. Frequency components causing the aliasing in the slower sampling circuit are replicated from the faster sampling circuit at the appropriate amplitude, folded into the aliased frequency, and subtracted from the output of the slower sampling circuit. The outputs of both sampling circuits are then merged. These techniques extend the bandwidth of the slower conversion system without degrading the low-frequency accuracy of the slower conversion system.